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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,644	06/25/2003	James D. Burrington	3215	2753

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EXAMINER

MCAVOY, ELLEN M

ART UNIT PAPER NUMBER

1764

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/603,644

Applicant(s)

BURRINGTON ET AL.

Examiner

Ellen M. McAvoy

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2006 and 20 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 5-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>30 May 2006</u> . | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 30 May 2006 and 20 July 2006 have been entered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2 and 11-22 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the specific components of A, B and C, does not reasonably provide enablement for component A which is selected from the group consisting of "at least one component with at least one or more reactive or associative groups", component B which is selected from the group consisting of "a particle or other component with at least one group which reacts or associates with component A to form a gel", and component C which is selected from the group consisting of "at least one or more lubricant additives". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to employ all possible components of A, B and C as the invention

commensurate in scope with these claims. It has been well established that there must be a reasonable correlation between the scope of the exclusive right granted to a patent applicant and the scope of enablement set forth in the patent application. *In re Fischer*, 427 F.2d 833, 839; 166 USPQ 18, 24 (CCPA 1970).

Claims 1, 2 and 5-22 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The added limitation to independent claim 1 “wherein the gel dissolves into the lubricating oil of a lubricating oil engine over time” is indefinite since *the* lubricating oil lacks antecedent basis in the claim. The claim is drawn to a composition comprising one or more additives in a form of a gel, and not to a lubricating oil composition.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5-10 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higton et al (6,310,010).

As previously set forth, Higton et al [“Higton”] discloses concentrates for lubricating oil compositions which are prepared by mixing at elevated temperatures (i) at least one high molecular weight ashless dispersant; (ii) at least one oil soluble overbased metal detergent; and (iii) at least one surface-active agent comprising a low molecular weight hydroxyl or amine group. Higton teaches that while it is convenient to provide “additive packages”, some of the additives such as overbased metal detergents and high molecular weight dispersants tend to interact with each other, and that in some instances, the interaction results in gelation. See column 1, lines 30-48. While not wishing to be bound by theory, Higton believes that the dispersant/detergent complex causes an increase in viscosity because the lipophilic groups of the ashless dispersant of one complex can interact with the lipophilic groups of another complex. Higton teaches that the viscosity may rise uncontrollably to the extent that gels may form which is referred to as the Weissenberg Effect. See column 2, lines 30-43. Suitable ashless dispersants include polyisobutylene succinimides and Mannich base condensates. See column 5, line 62 to column 11, line 22. Suitable detergents include oil-soluble overbased sulfonates, phenates, sulfurized phenates, and salicylates of alkali or alkaline earth metals. See col. 11, lines 23-56. Higton also allows for the addition of other additives to the concentrate such as antioxidants, anti-wear agents and viscosity modifiers. See column 5, lines 8-17. The examiner maintains the position that Higton meets the limitations of the claims when the dispersant/detergent/antioxidant combination in the additive package forms a gel. Example 1 in column 17 sets forth a blend of an ethylene-butene copolymer substituted dispersant and an overbased detergent containing magnesium sulfonate with a TBN of 400. The Weissenberg Effect (gelling) occurred in several

additive packages as shown in Table 1. Although reducing emissions is not taught, Higton teaches that the gels are suitable for use as lubricants in gasoline and diesel engines and the property of reducing emissions is seen to be inherent.

Applicants argue that they amended independent claim 1 to include the limitation that the gel compositions dissolve into a lubricating oil, not at the time of the blending of any lubricating oil or additive concentrate, but rather over time during the operation of the engine. This is not deemed to be persuasive because it is not clear what amount of time is meant by the claimed phrase “over time”. The examiner is of the position that as little as 10 seconds could meet the claimed limitation of “over time”.

Applicants argue that:

“Additionally, Higton, et al. teaches at column 3, lines 49 through 50 that ‘the inclusion of the surface active agent enables the viscosity of the concentrate to be controlled within manageable limits.’ Higton, et al. discloses a method for inhibiting the viscosity increases that make concentrate handling more difficult. The increases in viscosity that Higton et al. seeks to avoid make the disclosed concentrate handling impossible to preform, well before the compositions actually form gels. In short, Higton, et al. uses surface active agents to minimize any increase of viscosity, especially increases large enough to lead to the formation of any gel, in liquid additive concentrates. In contrast, Applicants claimed invention is directed to compositions that, by design, result in gels, and which are of such high and even immeasurable viscosities that they are unsuitable for use as concentrate additives as disclosed in Higton et al., as the gels cannot be pumped, blended or handled as conventional concentrate.”

This is not deemed to be persuasive because independent claim 1 is drawn to a composition comprising one or more lubricant additives in the form of a gel. As applicant notes above, Higton teaches that his compositions, which may comprise the same additive components as claimed, may form gels. The fact that Higton seeks to minimize this by the addition of surface

active agents does not change the fact that the composition of claim 1 is not novel which is what is needed to result in the patentability of the claim.

Applicants argue that their claims are directed to gel compositions only, and that any compositions containing surface active agents that result in liquid, non-gel, compositions, such as those disclosed in Higton are not included in applicants' claims. This is not deemed to be persuasive because the claims are open-ended by the language "comprising". The examiner is of the position that the claims do not exclude the liquid, non-gel compositions of Higton.

The Declaration under 37 C.F.R. § 1.132 by inventor Burrington has been carefully considered. The Declaration states that the "gel compositions claimed in the pending application are non-liquid materials which do not flow, do not have measurable viscosities, and which cannot be pumped, blended or handled as liquid concentrates." And that "gels are solid-like, non-liquid materials." However, such language is not included in the claims to describe the additive compositions. The examiner is of the position that the general definition of a "gel" is that of a colloidal solution of a liquid in a solid. (Hackh's Chemical Dictionary). As set forth above, Higton teaches that the composition of a dispersant/detergent complex causes an increase in viscosity which may rise uncontrollably to the extent that gels may form.

#### ***Allowable Subject Matter***

Claims 11-22 are objected to as being dependent upon a rejected base claim (under sections 35 USC 112 and 103), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Upon further consideration, the examiner is of the position that the process claims 11-22 which comprises contacting a portion of an engine oil with a “gel” (as defined in the Declaration) resulting in the reduction of soot in the engine oil and/or emissions in an engine exhaust appears to be allowable over the Higton reference.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

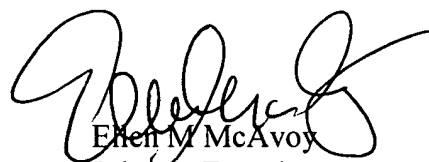
If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would



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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
September 20, 2006